

Patent claims

1. A device for effecting the, in particular continuous, treatment, preferably the cleaning, of
5 a metal strip (2) by means of a treatment liquid, particularly a pickling liquid, the metal strip being guided, preferably horizontally, through at least one tank (1) for accommodating the treatment liquid, particularly a pickling tank, with at least
10 one pump circulation tank (3), preferably two pump circulation tanks, for preparing or storing and/or holding the treatment liquid, characterized in that the pump circulation tank (3) is arranged directly under the tank (1).
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2. The device as claimed in claim 1, characterized in that the tank (1) is configured as a shallow tank.
3. The device as claimed in claim 2, characterized in
20 that the tank (1) is configured with at least one cover.
4. The device as claimed in one of the preceding claims, characterized in that the pump circulation
25 tank (3) and the tank (1) form a unit.
5. The device as claimed in one of the preceding claims, characterized in that the tank (1) is structurally mounted on the at least one pump
30 circulation tank (3).
6. The device as claimed in one of the preceding claims, characterized in that the contact surface between the tank (1) and the at least one pump
35 circulation tank (3) is provided with a seal (18).
7. The device as claimed in one of the preceding claims, characterized in that the bottom (9) of the

tank (1) forms the cover for the at least one pump circulation tank (3).

- 5 8. The device as claimed in one of the preceding claims, characterized in that the tank (1) and the pump circulation tank (3) are produced from plastic, preferably polypropylene.
- 10 9. The device as claimed in one of the preceding claims, characterized in that the tank (1) and the at least one pump circulation tank (3) are produced from rubberized steel.
- 15 10. The device as claimed in one of the preceding claims, characterized in that the tank (1) is connected to the at least one pump circulation tank (3) via run-off chambers (4) and/or via at least one run-off (6) accommodating a change in length.
- 20 11. The device as claimed in one of the preceding claims, characterized in that the run-off (6) is arranged centrally in the tank (1), seen in the strip running direction.
- 25 12. The device as claimed in one of the preceding claims, characterized in that the tank (1) has a bottom (9) sloping down toward the run-off (6).
- 30 13. The device as claimed in one of the preceding claims, characterized in that the at least one pump circulation tank (3) has a bottom (17), having a slope over the entire length, the slope being aligned in the strip running direction.
- 35 14. The device as claimed in one of the preceding claims, characterized in that the at least one pump circulation tank (3) has a bottom (17), having a slope over the entire length, the slope being

aligned transversely in relation to the strip running direction.

- 5 15. The device as claimed in one of the preceding claims, characterized in that the space in the run-off chamber (4) between the separating wall (11) and the outside wall (12) of the run-off chamber can be closed in a gastight manner by a flap (10) which can be actuated from the outside.
- 10 16. The device as claimed in one of the preceding claims, characterized in that, for ventilating and/or venting the pump circulation tank (3), at least one connecting line (14) is arranged between
- 15 the pump circulation tank (3) and the tank (1).
17. The device as claimed in one of the preceding claims, characterized in that the treatment liquid is delivered from the at least one pump circulation
- 20 tank (3) into the tank (1) by means of pumps.
18. A method for modifying a treatment device, preferably for cleaning, of a metal strip (2) by means of a treatment liquid, particularly a
- 25 pickling liquid, the metal strip being guided, preferably horizontally, through at least one tank (1), particularly a deep tank, for accommodating the treatment liquid, characterized
- 30 - in that the tank (1) is removed,
- in that a shallow tank and a pump circulation tank are installed in place of the tank.
- 35 19. The method as claimed in claim 18, characterized in that the at least one pump circulation tank is arranged directly under the shallow tank.